

# Children's Environmental Health



## 3. Counties Not Meeting Ozone & Particulate Air Quality Standards 4. Smoking Rates by Region

Numerous studies have demonstrated air pollution's potential to harm children with asthma. One study found that on high ozone pollution summer days, children with asthma were 40 percent more likely to suffer asthma attacks.<sup>1</sup> According to a University of Louisville study, ozone and other hazardous air pollutants are suspected of contributing to pediatric asthma hospitalizations in Jefferson County. The study found that rates for asthma hospitalizations in 2000 and 2001 for children residing in the inner city of Louisville, where ozone and hazardous air pollutants are more prevalent, were twice the national average.<sup>2</sup>

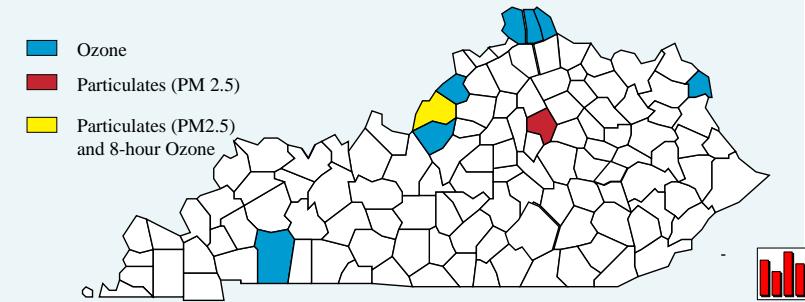
Eight Kentucky counties (Boone, Boyd, Bullitt, Campbell, Christian, Kenton, Jefferson and Oldham) have been designated by the EPA as not meeting the more protective national 8-hour ozone air quality standard.<sup>3</sup> Studies have also shown that exposure to fine particles in the air can exacerbate asthma. Monitoring data for 2001-2003 reveals that two Kentucky counties (Fayette and Jefferson) will not meet a new more protective PM 2.5 particulate standard.<sup>4</sup> An estimated 311,967 children (ages 0-14) reside in the 9 Kentucky counties with unsafe levels of ozone and particulate pollution.<sup>5</sup>

Another contributing factor to asthma is secondhand smoke. The U.S. Environmental Protection Agency estimates that between 200,000 and 1 million children with asthma have had their condition worsened by exposure to secondhand smoke.<sup>6</sup> In addition, children exposed to secondhand smoke are more likely to suffer from pneumonia, bronchitis and other lung diseases.<sup>7</sup> In 2002, Kentucky had one of the highest smoking rates in the nation at 32.6 percent.<sup>8</sup> Annually, tobacco-related illnesses take the lives of more than 6,800 Kentuckians.<sup>9</sup> A review of smoking rates by Area Development District (ADD) reveals the Kentucky River ADD leads the state with a 40.6 percent smoking rate, followed by the Cumberland Valley ADD with a 39.5 percent rate. The 2002 Youth Risk Behavior Survey found 32.7 percent of high school students in the state said they had smoked cigarettes on one or more days in the past month and 18.4 percent had smoked cigarettes on 20 or more days in the past month, which is among the highest in the nation.

The Kentucky Department for Public Health has set a goal to reduce the smoking rate in Kentucky to 23 percent by 2010. The state has also developed a strategy to reduce exposure to secondhand smoke focusing on increasing the number of local ordinances and policies to restrict tobacco as well as increasing the number of schools and workplaces with tobacco-free environments.<sup>10</sup> In 2004, the Lexington Fayette Urban County Government became the first local government in Kentucky to pass a smoking ban in all public buildings. A number of restaurants have also gone smoke free across the state, including 125 in Northern Kentucky.<sup>11</sup>

## Childhood Asthma

### Indicator 3. Counties Not Meeting the 8-Hour Ozone and the PM 2.5 Air Quality Standard<sup>endnote</sup>



CD - Table 2. 4 highest ozone readings by air quality monitor.

CD - Table 3. PM2.5 readings by air quality monitor.

CD - Table 4. Population in impacted ozone and particulate counties.



### Indicator 4. Smoking Rates by Region (Area Development Districts)<sup>endnote</sup>

